



Landscape and Open Space Design Guidelines

Adopted November 1999

I. Purpose

A. The purpose of these guidelines is to assist in the design and layout of open space, as provided on developed lots within the District. The intent of these guidelines is to promote the health, safety, and the general welfare of the public; to conserve natural resources; to enhance properties and their values; to preserve the character of the area; and to encourage the appropriate use of the land. In general:

1. Regulated open space is comprised of natural and landscaped areas and stormwater management areas conforming to the provisions of Section II below.
2. Contiguous open space on adjoining properties is encouraged to provide the maximum benefit to people and wildlife.
3. The planting design is an integral component of the overall site development. The plantings shall consider the entry experience; visual, climatic, erosion and traffic control; noise abatement; stormwater management; habitat enhancement; and consideration of existing on and off site features.
4. Open space which is set aside as a natural area shall be preserved or enhanced to protect or improve natural habitats and scenic views and may provide passive recreation opportunities.

II. General Guidelines

A. Open space is required by the zoning regulations on all developed sites in the District. The specific percentage required varies by zone. The required percentages are listed under the bulk and area requirements of each zone, see N.J.A.C. 19:4-1 *et seq.*, and are summarized in the table below.

B. An Open Space Plan is required for all applications of new construction, additions, and site improvements. If the landscaped open space area is greater than 20,000 square feet, such plan(s) to be prepared, signed and sealed by a New Jersey Certified Landscape Architect or other qualified professional. All landscape improvements shall be complete before the Office of the Chief Engineer issues an Occupancy Certification.

C. Areas that fulfill the open space requirements include the following:

1. Landscaped and natural areas at grade level which fulfill the minimum open space size requirements.
2. Open space areas shall have a minimum dimension of five (5) feet in any direction and a minimum area of 50 square feet. It is recommended that, for lots over three (3)

acres in size, open space have a minimum dimension of ten (10) feet in any direction and a minimum area of 100 square feet.

3. Hardscape areas within an open space area should contain a minimum of 20 percent of the total area planted, and may include containers and raised planters.

4. A stormwater management area may count towards the overall amount of required open space. It is recommended that said area be part of a larger open space area at least twice the size of the stormwater management area.

D. All proposed planting shall conform to the current standards for hardiness zone 6 set forth in the American Standard for Nursery Stock, published by the American Association of Nurserymen (AAN), latest edition, as developed by the United States Department of Agriculture.

E. Natural areas include habitats such as wetlands, tidal marshes, waterways, natural drainage-ways, woodlands and grassland meadows.

F. The Division of Land Use Management and Legal Affairs may require trees over 6" caliper to be preserved.

G. The provision of employee amenities such as picnic tables, seating areas and recreational elements is encouraged.

MINIMUM OPEN SPACE REQUIREMENTS BY ZONE

ZONE	MINIMUM REQUIREMENT	ZONE	MINIMUM REQUIREMENT
Heavy Industrial	15%	Low Density Residential ¹	35%
Light Ind. "B"	15%	Research Distribution Park	20%
Light Ind. "A"	15%	Commercial Park	20%
Research Park	50%	Neighborhood Commercial	15%
Service-Hwy. Comm.	15%	Waterfront Recreation	40%
Hwy. Commercial	30%	Public Utility	15%

¹ Single- and two-family dwellings: 50 %

III. Open Space Plan

A. The open space plan shall be drawn at the same scale as the site plan. The plan shall indicate all improvements including proposed buildings and structures, pedestrian and vehicular use areas, utility areas and open space improvements. The plan shall indicate all hardscape, stormwater management areas and elements requiring screening with sufficient details and specifications to ensure compliance with the District zoning regulations.

B. It is recommended that the plan indicate all existing vegetation cover types and trees over 4" caliper.

C. All trees to be preserved or relocated shall be indicated on the plan.

D. Applicants are encouraged to include a complete plant schedule on the plan. Typically, a plant schedule consists of a table indicating the botanical and common names, quantity, size, both at time of planting and at maturity, root and spacing of all proposed plantings. An example of a typical plant schedule follows:

PLANT SCHEDULE

BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE		ROOT	SPACING
			At planting	At maturity		

E. Details and specifications of plantings, including seed and sod, and other site features shall be provided on the plan

IV. Design Parameters

A. There are restricted planting areas at the intersections of streets, driveways and service lanes to provide adequate sight triangles.

B. The material used for walkways located within natural areas should allow for the percolation of water into the ground. Suitable materials include wooden decking or crushed gravel.

C. There shall be a buffer of open space not less than five (5) feet in width around the perimeter of the developed site, except at driveways or other openings.

D. Existing healthy trees of desirable species are encouraged to be retained on-site and shall count towards the planting requirement.

E. The following planting densities are recommended:

1. Front Yard Planting - Plantings are encouraged along the front property line (see N.J.A.C. 19:4-2.2 for "Front Yard" definition). Along a public right of way, at least one (1) major shade tree for each 30 linear feet of frontage and one (1) shrub for each 15 linear feet of frontage shall be provided. This shall not be construed as recommending the planting of trees on thirty (30) foot centers. The space between trees and shrubs may vary.

2. Parking Plantings - It is recommended that a minimum of one (1) shade tree and ten (10) shrubs for every 3,000 square feet of vehicular use area or one (1) shade tree and ten (10) shrubs be planted for every ten (10) parking spaces, whichever is greater. The shade trees should be spaced evenly within the parking area to provide the maximum amount of shaded area to the parking spaces, and reduce heat and glare. No more than two (2) shade trees fulfilling this recommendation should be located within a common traffic safety island. Species selected shall be tolerant of urban conditions.

3. Vehicular Buffer - Vehicular use areas are required to have a buffer along all property lines. This vehicular buffer shall consist of a landscaped open space strip with a minimum width of five (5) feet. It is recommended that a minimum of one (1) tree (shade or evergreen) per 50 linear feet of vehicular buffer and one (1) shrub per ten (10) linear feet of vehicular buffer are planted within the buffer area. The spacing between the plantings may vary.

4. Stormwater Management Planting - It is recommended that a minimum of one (1) tree and five (5) shrubs be planted for each 100 linear feet of stormwater management area edge. The plantings should be located along the edge of the stormwater management area.

5. General Planting - It is recommended that a minimum of one (1) shade tree and five (5) shrubs be planted for every 1,000 square feet of open space area. The General Planting requirement is in addition to the Front Yard, Parking, Vehicular Buffer and Stormwater Management plantings. These plantings may be located anywhere on the open space of the lot.

F. As a guideline, the Commission recommends that a minimum of 60% of all required plantings be native to the State of New Jersey

G. A list of suggested and discouraged plant material is attached to these guidelines.

H. The following are recommended minimum sizes and heights of plant material at the time of planting:

<u>PLANT TYPE</u>	<u>MINIMUM SIZE</u>
Shade Tree	2½" - 3" cal., 12-14 ft.
Flowering Tree	6-8 ft. ht.
Coniferous Evergreen Tree	5-6 ft. ht.
Deciduous Shrub (upright)	24"-30" ht.
Deciduous Shrub (spreading)	24"-30" spread
Broadleaf Evergreen Shrub	24"-30" ht.

I. Hardscape areas:

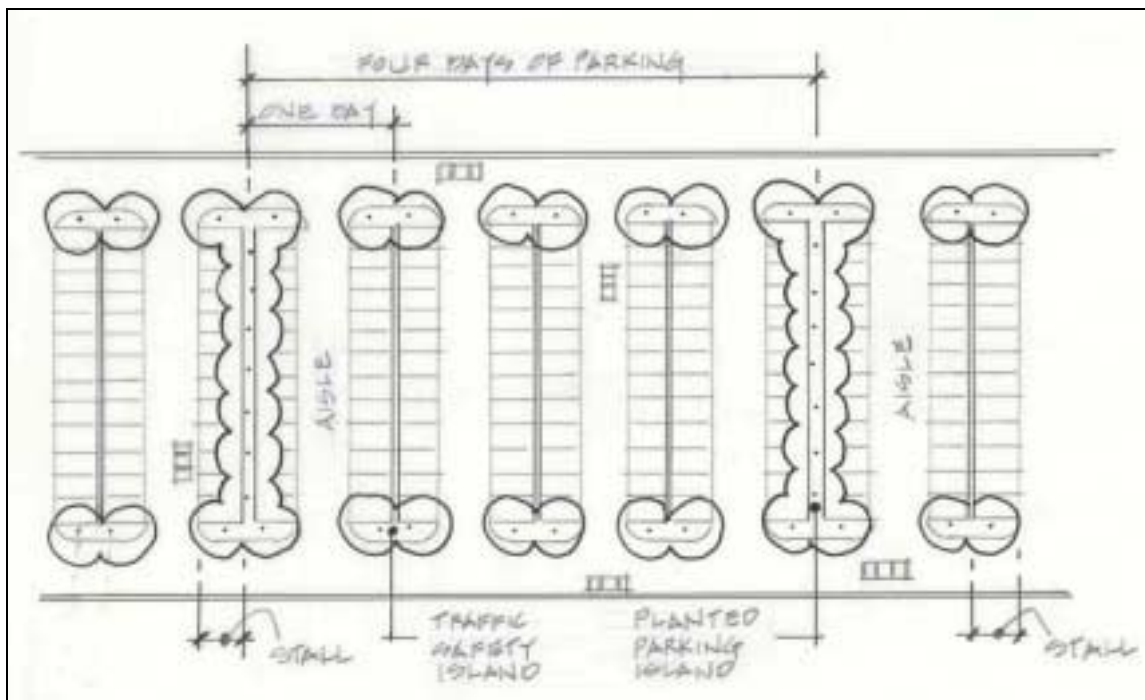
1. All hardscape areas such as plazas and walkways shall be designed to promote the use and enjoyment of outdoor spaces by area users. The spaces shall be visually integrated with the architecture of surrounding buildings and serve to enhance the microclimate of the activity area.
2. The pedestrian circulation system shall be comprehensive and, where feasible, link all open space areas.

J. Parking areas:

1. All parking areas shall be designed to prevent damage by vehicles to improvements including adjacent fences, walls, plantings and lighting fixtures.
2. It is recommended that parking islands be provided for every four bays of parking. These islands should be planted with trees, shrubs, ground covers and/or turf.
3. The material selected for the two (2) foot wide parking space overhang area may be planted or covered with a water permeable material such as granite cobbles, concrete pavers or decorative stones. If the overhang area is planted, the plantings must be of suitable height and hardness for the use of the area.
4. It is recommended that traffic safety islands be provided at the ends of all bays of parking to separate parking areas from driveways, aisles or other areas, as deemed necessary by the Division of Land Use Management and Legal Affairs. These safety islands should be planted with appropriate shade trees and/or other plantings.

PARKING

NOT TO SCALE



K. Screening:

1. Off street parking areas, loading areas, accessory trailer parking areas, outdoor storage areas, satellite antenna foundations, refuse and recycling areas, and utility improvements such as transformers and external heating and cooling equipment shall be effectively screened from the public view from adjacent properties and/or the public right of way, at eye level.
2. Screening may consist of a wall or fence, a landscaped screen, landscaped berm or a combination thereof.
3. Walls or fences used as screens should be landscaped along the exterior face. The height of the wall or fence shall be equal to the height of the element to be screened.
4. A landscape screen of either evergreen or deciduous plant material shall reach a mature height and width equal to, or greater than, the structure or use required to be screened. Spacing should be 18 to 36 inches apart, depending upon the species.
5. All berms shall be planted and shall have a maximum side slope of 3:1, contoured for natural drainage and erosion prevention. Berms shall be designed with physical variations in height and alignment throughout their length.

SUGGESTED LEVEL OF SCREENING

FEATURE TO BE SCREENED	PUBLIC ROW	ADJACENT PROPERTY IN NON-RESIDENTIAL ZONE	ADJACENT PROPERTY IN RESIDENTIAL ZONE
Off-street parking areas	Low	Low	Medium
Loading areas	Medium	Low	Medium
Refuse and recycling areas	High	High	High
Utility improvements	Medium	Low	Medium
Accessory trailer parking areas	Medium	Low	Medium

TYPES OF SCREENS

SCREEN LEVEL	OPACITY	SCREEN TYPE
High	Solid Screen (100% screened at eye level)	Wall or fence
Medium	Visual Buffer	Landscaped screen, bermed and planted with evergreen and deciduous trees and shrubs
Low	See-through Landscape Screen	Buffer planted with deciduous trees and shrubs